

Fractal Harmonic Field Theory - Page 50: Cyclone Field Entropic Force Geometry

This page presents the first formal model of a *entropy vortex* a cyclonic recursion structure whose entropic force field mirrors galactic halo dynamics and dark matter lensing.

1. Field Definition (2D Gaussian Vortex):

$$S(x, y) = S_0 \exp\left[-\frac{(x^2 + y^2)}{2R^2}\right]$$

Where:

S_0 is peak entropy density

R is vortex scale radius

(x, y) are spatial coordinates

2. Entropic Force Components:

$$F_x = -\left(\frac{x}{R^2}\right) S_0 \exp\left[-\frac{(x^2 + y^2)}{2R^2}\right]$$

$$F_y = -\left(\frac{y}{R^2}\right) S_0 \exp\left[-\frac{(x^2 + y^2)}{2R^2}\right]$$

This produces a harmonic inward pull that decays radially a recursive, fractal field geometry.

3. Geometry and Behavior:

The force field is centripetal

Vortex core represents minimal entropy

Structure is fractal and rotationally symmetric

guides radiation like a spiral harmonic lens

4. Physical Implications:

Models dark matter halo behavior without particles

Describes gravitational lensing via recursive force

Shows how \mathcal{F} can shape galactic rotation, radiation arcs, and entropy-driven structure formation

Conclusion:

The cyclone field is a concrete manifestation of entropy recursion in motion — a fractal attractor shaping space, bending light, and encoding dark matter in pure field geometry.